

IN THE CLAIMS:

The status of each claim that has been introduced in the above-referenced application is identified in the ensuing listing of the claims. This listing of the claims replaces all previously submitted claims listings.

1. (Currently amended) A semiconductor device assembly, comprising:
a carrier substrate ~~comprising~~ including a substantially planar structure, ~~with a surface including~~
~~at least one opening formed through the carrier substrate, and at least one first contact~~
~~area thereon~~ on a first surface of the substantially planar structure, proximate to the at least
one opening ~~formed through the carrier substrate~~; and
a solder mask positioned on the first surface, extending to an outer peripheral edge of the first
surface, and comprising at least one opening through which the at least one opening and
the at least one first contact area of the carrier substrate are exposed;
~~wherein the carrier substrate comprises an insulative material.~~

2. (Currently amended) The semiconductor device assembly of claim 1, further comprising:
at least one semiconductor die secured to ~~another~~ a second surface of the carrier substrate
opposite the first surface thereof, at least one bond pad of the at least one semiconductor
die being exposed through said the at least one opening of the solder mask and the at least
one opening of said the carrier substrate.

3. (Previously presented) The semiconductor device assembly of claim 2, further comprising:
at least one intermediate conductive element extending between the at least one bond pad and the
at least one first contact area.

4. (Currently amended) The semiconductor device assembly of claim 3, wherein a thickness of the solder mask exceeds a height of the at least one intermediate conductive element that protrudes above the first surface of the substantially planar structure of the carrier substrate.

5. (Currently amended) The semiconductor device assembly of claim 3, further comprising:

a quantity of encapsulant material within the at least one opening of the substantially planar structure of the carrier substrate and the at least one opening of the solder mask.

6. (Currently amended) The semiconductor device assembly of claim 5, wherein an upper surface of the quantity of encapsulant material is substantially level with an outer surface of the solder mask.

7. (Previously presented) The semiconductor device assembly of claim 5, wherein a distance between an uppermost portion of the at least one intermediate conductive element and an outer surface of the solder mask is at least about 25 μm .

8. (Previously presented) The semiconductor device assembly of claim 7, wherein the at least one intermediate conductive element comprises a bond wire and a thickness of the solder mask is equal to the sum of a distance of a portion of a loop of the bond wire that protrudes above the surface of the carrier substrate and about 25 μm .

9. (Previously presented) The semiconductor device assembly of claim 1, wherein the carrier substrate includes at least one second contact area on the surface thereof and at least one conductive trace electrically connecting the at least one first contact area and the at least one second contact area.

10. (Previously presented) The semiconductor device assembly of claim 9, wherein the at least one second contact area is at least partially exposed through an aperture of the solder mask.

11. (Previously presented) The semiconductor device assembly of claim 10, further comprising:

at least one discrete conductive element protruding from the at least one second contact area above the solder mask.

12. (Previously presented) The semiconductor device assembly of claim 11, wherein at least half of a height of the at least one discrete conductive element protrudes above an outer surface of the solder mask.

13. (Previously presented) The semiconductor device assembly of claim 1, wherein the solder mask comprises a material with a coefficient of thermal expansion substantially the same as a material of the carrier substrate.

14. (Previously presented) The semiconductor device assembly of claim 1, wherein the solder mask comprises a cured photoimageable material.

15. (Previously presented) The semiconductor device assembly of claim 1, wherein a thickness of the solder mask is about 50 μm to about 100 μm .

16. (New) The semiconductor device assembly of claim 1, wherein the solder mask comprises a plurality of adjacent, mutually adhered regions.

17. (New) The semiconductor device assembly of claim 1, wherein the solder mask comprises an insulative material.